



UV COATINGS FOR INTERIOR FURNISHINGS

A HIGH-TECH, SUSTAINABLE APPROACH



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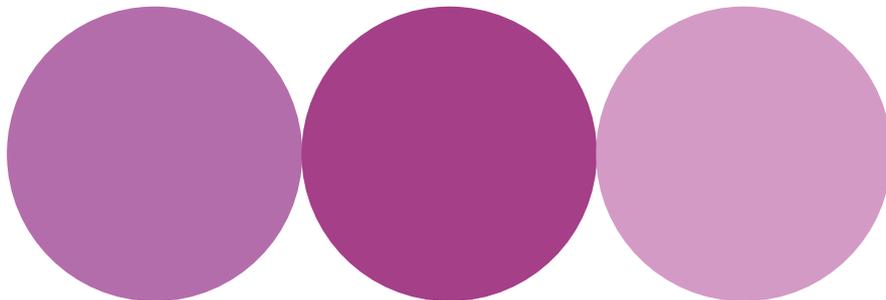
SPECIALIZATION AND CUSTOMIZATION TO SUPPORT THE CLIENT

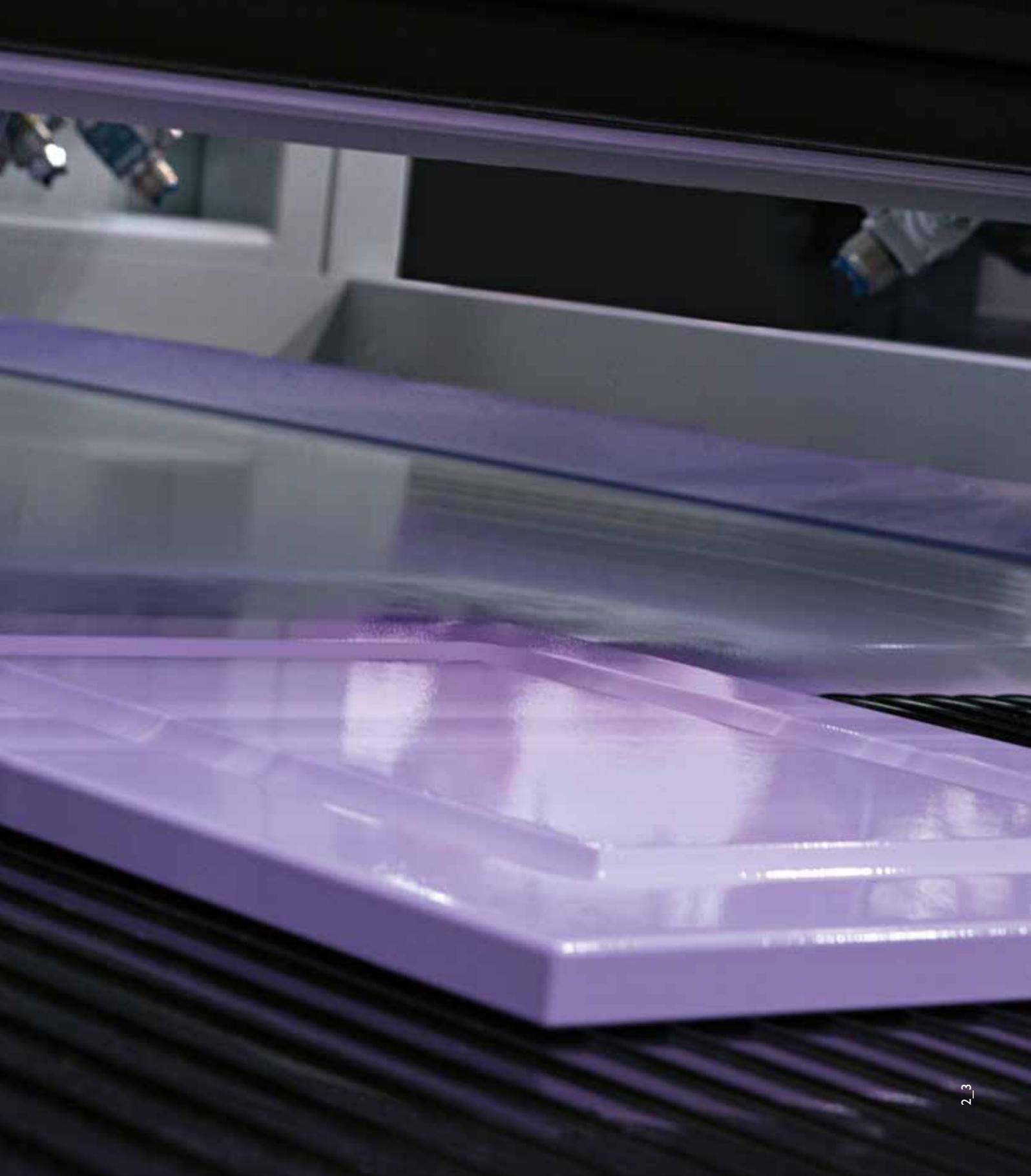
ICA Group's Research & Development laboratory is constantly engaged on coming up with products and solutions that have what it takes to **make the most of its clients' wooden articles** (cabinet doors, modular furnishings, doors and flat panels, etc.), and of their heritage of **style, creativity, design and high quality**.

The ongoing research conducted into state-of-the-art technical solutions and the partnerships with leading names in the manufacture of coating systems have together made it possible for ICA Group to formulate **acrylic, polyester and polyacrylic UV coating products** that are able to comply with the most stringent application and instrumental tests. In addition, these products provide a tangible response to clients' requirements for **high levels of quality and productivity and low levels of solvent emissions into the atmosphere**.

On the basis of the experience accumulated since the early '80s in the field of water-based coatings, in 2000 ICA Group's Research & Development laboratories once again laid down a new challenge for the market through the formulation of the first **water-based products that can be dried with UV lamps**. Today, more than a decade on, ICA Group benefits from the input of a team of researchers who deal with these products on a full-time basis.

The ICA Group technicians continually test the **compatibility of UV technology** with innovative formulas for application not only to wood but also to **paper, plastic and glass**, with a view to achieving high-performance results on surfaces other than wood.







COLORS AND EFFECTS

ICA Group's products have become the solutions of choice for wood coatings, thanks to the extensive range available and the exceptional **focus on color**.

The level of specialization that the group has achieved in the manufacture of **pigmented UV products** allows it to offer myriad tones [from pastel shades to bright colors] and effects [sandblasted, matt, gloss and metallic] that afford not only great **versatility but also tremendous potential for customization**.

The **ICA COLOR tintometric system** was created specifically to offer clients the instruments, software and know-how necessary to produce any pigment – transparent or hiding – simply and independently.

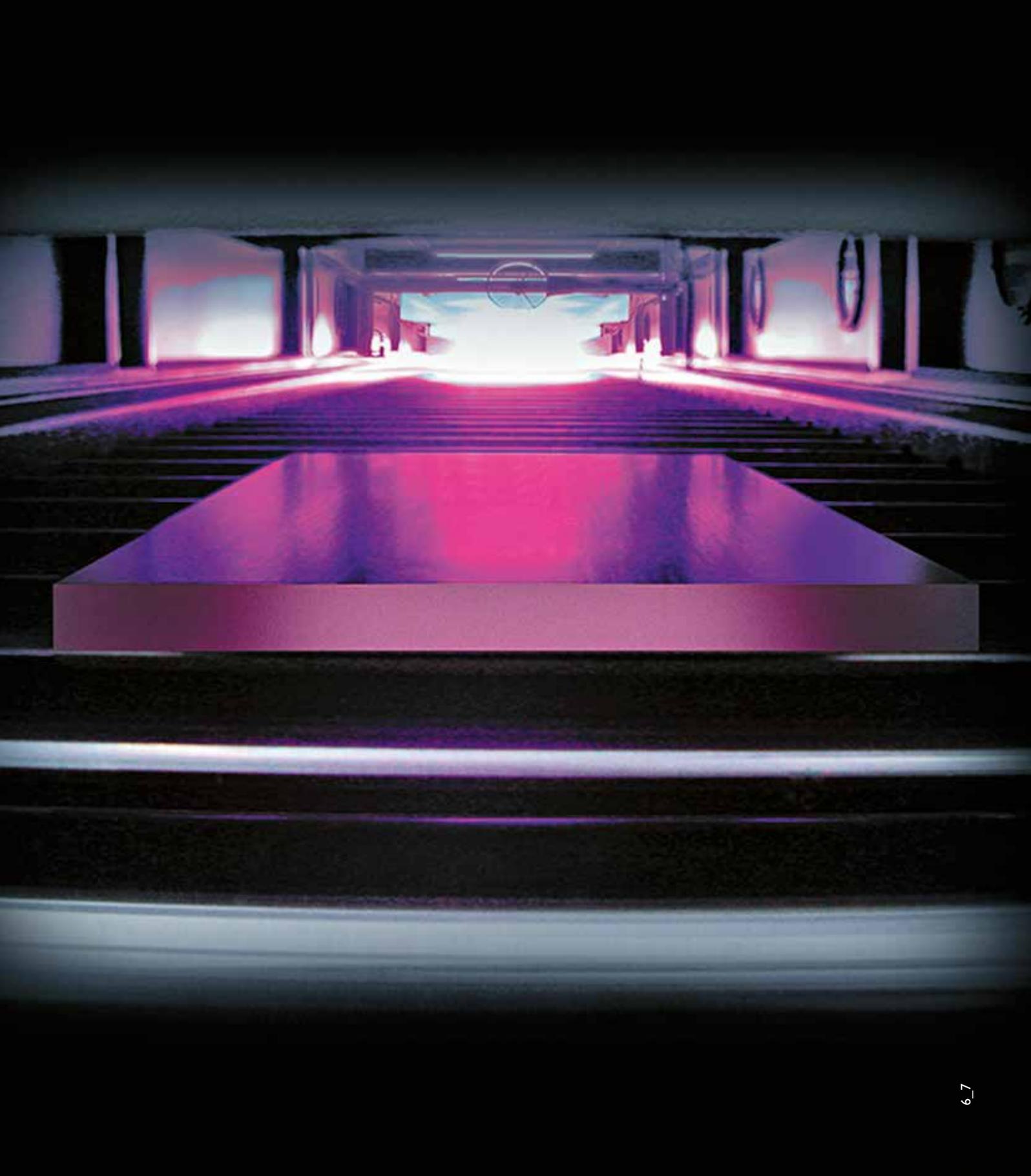


HIGH LEVELS OF CHEMICAL/PHYSICAL AND APPLICATION PERFORMANCE

ICA Group has set aside an entire area of its **Research & Development** laboratory for the application of products. The laboratory area in question plays host to the most important machinery used in the coating of wood. The available systems make it possible not only to verify the behavior of the new formulations under various application conditions but also to simulate entire coating cycles in real time and under real conditions. They also allow the client to evaluate fully the products being proposed.

Another part of the laboratory is set aside for the conducting of chemical/physical tests on the applied products. These tests are carried out on the coated surfaces both during the experimental phase and whenever requested by the client, with a view to verifying in-depth the technical characteristics of the product and to guaranteeing the delivery of solutions that are always innovative and of the highest possible quality.







ADHESION TEST

- Cross hatch test [UNI EN ISO 2409/07]
- Tear-off test [UNI 9240]

CHEMICAL/PHYSICAL RESISTANCE TESTING

- Resistance to cold liquids [UNI EN 12720]
- Pencil hardness [UNI 10782]
- Resistance to light [UNI EN 15187]
- Tendency to trap dirt [UNI 9300]
- Scratch resistance test [UNI EN 15186]
- Dry heat/wet heat test [UNI EN 12721-UNI EN 12722]
- Evaluation of the resistance of the surface to abrasion [UNI EN 15185]

CLIMATE TESTS

- Humidity [Internal method]
- Cold-check [UNI 9429/89]

FIRE-REACTION TEST

- Fire classification of construction products and building elements [European standard UNI EN 13501-1:2009, using the EN ISO 9239-1 test method]

TESTS ON INDOOR EMISSIONS

- Determination of the emission of volatile organic compounds from building products and finishing products [emission test chamber UNI EN ISO 16000-9]



PRODUCT RANGE

POLYESTER AND POLYACRYLIC UV COATINGS

Widely used in the coating of flat panels, thanks in part to their relatively low cost, polyester and polyacrylic UV coatings deliver sufficient reactivity for the in-line speeds currently requested, as well as a good-quality finish. They are formulated with unsaturated polyester resins dissolved in styrene, which functions as a solvent and at the same time reacts with the resin, thus determining the total solid content of the coating.

Polyacrylic coatings combine the characteristics of polyester coatings and acrylic coatings, offering excellent performance/cost ratios.

Surfaces: flat veneered surfaces, solid wood, MDF or chipboard, melamine paper and decorated paper.

ACRYLIC UV COATINGS

Compared to polyester UV coatings, acrylic UV coatings have a lower level of environmental impact, since the monomers they contain have a far lower level of volatility with respect to the styrene contained in polyester UV coatings, and they therefore make it possible to achieve products with 100% solid content. They offer excellent elasticity, adhesion and chemical/physical resistance. In addition, through the use of appropriate primers, it is also possible to resolve the problems that typically affect resinous woods and the issues relating to adhesion on difficult surfaces such as melamine paper, plastic and glass. Thanks to their reactivity, the products specifically formulated for the coating of profiles and cornices satisfy the requirement for processing at high transport speed, which is very common in this sector.

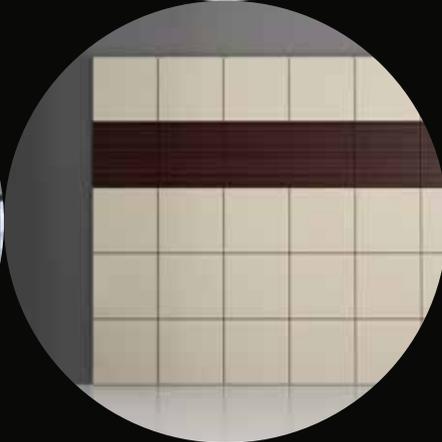
Surfaces: flat and three-dimensional veneered surfaces, solid wood, MDF or chipboard, melamine paper and decorated paper, metal, plastic materials and glass.

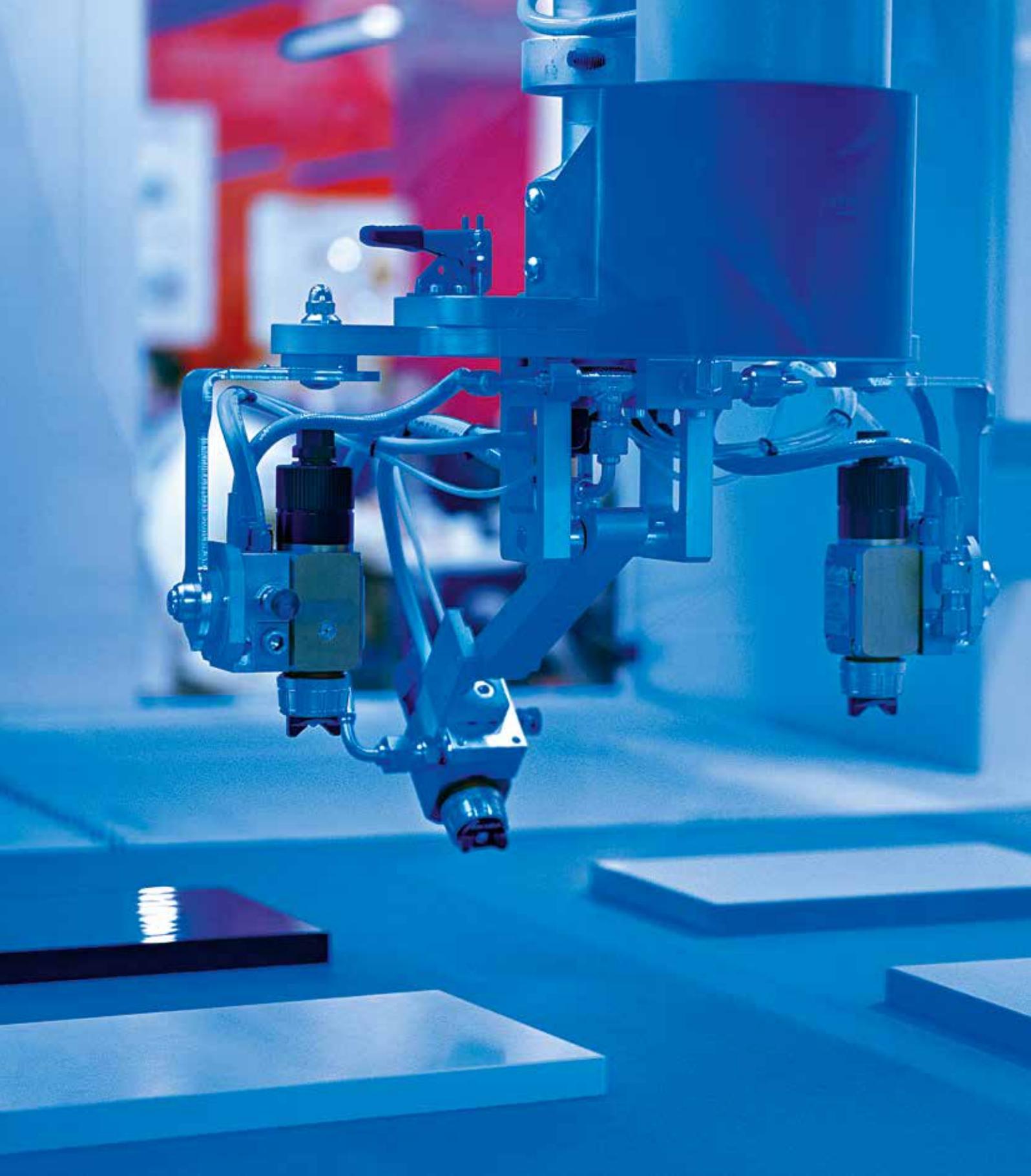
WATER-BASED UV COATINGS

Water-based UV coatings may be considered aesthetically equivalent to traditional acrylic and polyurethane coatings. The range is also composed of pigmented products without limits on the shades, but with excellent coverage and light stability, surpassing the typical limitations of polyester or acrylic UV coatings.

Thanks to their physical drying, water-based UV coatings even make it possible to coat three-dimensional objects. Last but not least, it is possible to carry out mixed coating cycles when necessary, using acrylic UV base coats and water-based UV top coats, which make the most of the advantages of the two types of technology.

Surfaces: flat and three-dimensional veneered surfaces, solid wood, MDF or chipboard, melamine paper and decorated paper, metal, plastic materials and glass.





PRIMERS AND SEALERS

Primers are intended to ensure maximum adhesion to the substrate and a high level of resistance to overcoating. Sealers are designed to enhance adhesion on veneers and solid woods containing oleaginous substances during roller application.

- Transparent polyester UV primers
- Transparent and pigmented acrylic UV primers
- Transparent water-based UV primers and sealers

BASE COATS AND FILLERS

Base coats and fillers guarantee high levels of coverage, surface adhesion and immediate sandability following drying with UV lamps.

- Transparent and pigmented polyester UV coatings
- Transparent and pigmented parafinated UV polyester coatings
- Transparent and pigmented polyacrylic UV coatings
- Transparent and pigmented acrylic UV coatings
- Transparent and pigmented water-based UV coatings [including dual cure]

TOP COATS

ICA's top coats stand out for their brilliance, transparency, distension and chemical/physical resistance. The transparent and pigmented matt and gloss [from 5 to 95 gloss] polyester UV coatings are applicable to UV fillers and base coats.

- Transparent and pigmented parafinated polyester UV coatings
- Transparent and pigmented matt and gloss polyacrylic UV coatings
- Transparent and pigmented matt and gloss [from 3 to 95 gloss] acrylic UV coatings
- Brushable transparent and pigmented matt and gloss [from 5 to 95 gloss] water-based UV coatings, applicable over water-based or polyurethane UV base coats, or polyester or acrylic fillers [both transparent and white]

APPLICATION TYPES	SPRAY			CURTAIN COATER		ROLLER			COATER	
	CARTESIAN OR ANTHROPOMORPHIC ROBOTS	LINEAR SPRAYING MACHINE	OSCILLATING SPRAYING MACHINE	GRAVITY HEAD CURTAIN COATER	PRESSURE HEAD CURTAIN COATER	ROLLER COATER	REVERSE	FILLING MACHINE	VACUUM COATER	EXTRUDER VACUUM COATER
POLYESTER UV COATINGS	•	•	•	•	•	•	•	•		
ACRYLIC UV COATINGS	•	•	•	•	•	•	•	•	•	•
WATER-BASED UV COATINGS	•	•	•	•	•	•				

LATEST PRODUCTS

HIGH SOLID CONTENT WATER-BASED UV BASE COAT

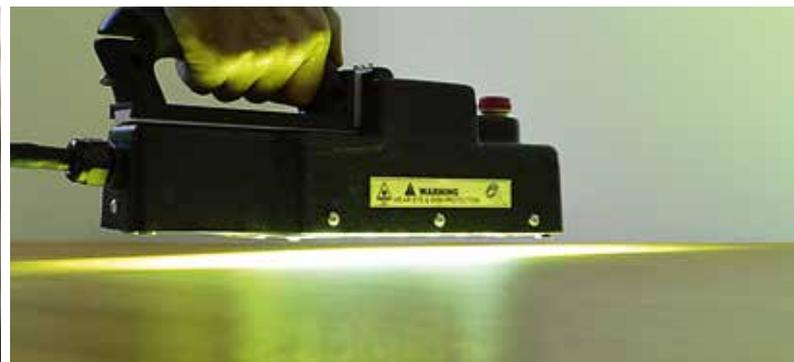
Recent developments in the formulation of water-based UV coatings have made it possible to produce a transparent base coat with high solid content that enables closed-pore coating with a limited number of coats. This allows for greater productivity and a reduction in the time spent in drying ovens. In terms of emissions, these coatings combine the typical advantages of water-based coatings with the advantages deriving from a high level of solid content.

WATER-BASED GLOSS UV COATINGS FOR SPRAY AND CURTAIN-COATER APPLICATION

Thanks to its ongoing Research & Development operations, ICA Group has overcome the technical limitations of water-based UV coatings, which previously prevented the production of gloss top coats. Today, these coatings form part of the range of top coats and offer high levels of brilliance, distension and brushability, in order to respond to the current coating requirements of the furniture industry.

POLISHABLE ACRYLIC GLOSS UV COATINGS FOR ROLLER, SPRAY AND CURTAIN-COATER APPLICATION

These UV coatings offer high levels of brilliance and coverage, making them ideal for transparent and pigmented gloss cycles. The opportunity to polish the gloss coating makes it possible to achieve defect-free surfaces that can be compared favorably to those created using polishable polyester or polyurethane coatings.



UV COATINGS FOR THE INERT COATING SYSTEM

These transparent and pigmented 100% acrylic UV coatings for the coating of flat panels made of wood, MDF or chipboard have been specifically designed for application with the Inert Coating system. This technology is mostly used for UV fillers and base coats.

UV COATINGS FOR EDGES AND BORDERS

These transparent and pigmented 100% acrylic UV coatings offer good adhesion on MDF, chipboard and wood species, and have been designed for flat and molded edges and borders. They can be applied by roller or vacuum coater, or with the Inert Coating system. They can then be dried using traditional UV lamps or LED lamps.

UV ON-SITE COATINGS

These high solid content and water-based UV products for the on-site coating of furniture offer high levels of chemical resistance and scratch resistance. They are simple to use and can be applied by spraying or brushing. Combined with UV technology and using the dedicated portable unit, they guarantee short drying times and immediate handling after UV radiation. Also available is a specific range for the on-site coating and restoration of wooden flooring.

COATINGS FOR DRYING WITH LED LAMPS

ICA Group now offers 100% acrylic UV coatings and water-based UV coatings that have been specifically formulated for polymerization with LED lamps alone or in combination with standard UV lamps.





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